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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,370	12/30/2003	Tim Etchells	021356-000500US	4883

20350 7590 07/27/2005

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EXAMINER	
JAWORSKI, FRANCIS J	

ART UNIT	PAPER NUMBER
3737	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/750,370	ETCHELLS ET AL.	
	Examiner	Art Unit	
	Jaworski Francis J.	3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08092004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11012004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-2, 9-10, 12-14, 16 - 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Peterson et al (US6126619), or in the alternative as obvious based upon Peterson et al in view of Wang et al (US6685639).

When read against base claim 1 as pertaining inter alia to applicants' Fig. 1, Peterson et al teaches a system and also a method for coupling a heating ultrasound transducer to a patient which includes a coupling circuit (Figs. 2,3) including pump 66, vacuum chamber 56 for applying a pressure gradient via vacuum pump 60 and a coupling storage tank 34 (Fig. 3) or reservoir 32 (Fig. 2) fluidically coupled to the former. Under this interpretation the patent insofar as it self-describes high energy ultrasound and Figs. 7 illustrate a focused application is anticipatory of the HIFU limitation of the preamble. The heat transfer associated with the front mass and manifold of the Peterson et al transducer acts as a chiller on fluid being heated by the therapy transducer(s). Alternatively a cooling tank is contemplated, see col. 4 lines 21-24. Water as well as the tank is also identified as '34' the coupling fluid. Vent valve 62 is part of the fluidic circuit.

When read against base claim 14 as pertaining inter alia to applicants' Figure 4, Peterson et al teaches a first housing e.g. Fig. 2 having one or more high energy ultrasound transducers, a second housing 10 having electronics, interface controls display and generator 16 power, and a system of Fig. 3 for circulating degassed fluid between storage-degasification tanks 46, 56 and transducer reservoir 32 via fluidic lines, where the two housings are also in electronic communication as shown by the single lead (control) lines of Fig. 3.

In the alternative if Peterson et al be construed to fall short in not stating the HIFU limitation then it would have been obvious in view of Wang et al element 5 of the face figure to de-gas a HIFU unit for hyperthermic heating since the mismatch problem due to fluid dissolved gas release interferes with all types of therapeutic ultrasound application.

Claims 3-8, 11-12, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson et al alone or further in view of Wang et al as applied to claim 1 above, and further in view of Rentschler et al (US5195509) since the latter evidences that it was well-known to provide coupling fluid vacuum de-gasification in a therapeutic circulatory system using a gas-permeable membrane, see col. 5 lines 20-42 and filter element 28. Vacuum pump 26 necessarily assists pump 31 in circulating fluid through the system under control of device 32..Valves and pressure and level sensors and operator gauges are customary in such patient contacting systems for adjusting the control levels to reduce fluctuations and so are represented in the latter patent.

Forssmann et al (US4530358) is cited as of interest for its Fig. 1 inclusion of vacuum degassification in the transducer fluidic circuit using valved port 31.

Any inquiry concerning this communication should be directed to Jaworski Francis J. at telephone number 571-272-4738.

FJJ:fjj

07222005

Francis J. Jaworski
Primary Examiner